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TITLE: Antimicrobial multi purpose microemulsion

Brief Summary Text (12):

A safe solvent system used in the instant compositions which has been found effective are glycol ethers such as propylene glycol butyl ether (PNB) alone or in combination with ethanol. PNB brings a significant benefit in degreasing performance and also promotes a fast drying out of the surface which has been cleaned. Oily material such as essential oil or perfume, when added to a composition, usually increase the streaks on surfaces.

Brief Summary Text (13):

The combination of a glycol ether with the surfactant system of the present invention allows a faster water film dry out time than obtained with current commercial spray formulations. It is important to select the perfume such as an essential oil not only to satisfy the cosmetic and the marketing needs, but also to have a minimum of residue left on the surface being cleaned. The selection of essential oils is also important because not only they will communicate the efficacy of the product to the consumer but also because they are effective bactericide.

Brief Summary Text (19):

0.4% to 3.0% of a perfume, water insoluble organic compound or essential oil; and

Brief Summary Text (27):

0.1% to 3.0% of a water insoluble organic compound, essential oil, or a perfume, and

Brief Summary Text (29):

As used herein and in the appended claims the term "perfume" is used in its ordinary sense to refer to and include any non-water soluble fragrant substance or mixture of substances including natural (i.e., obtained by extraction of flower, herb, blossom or plant), artificial (i.e., mixture of natural oils or oil constituents) and synthetically produced substance) odoriferous substances. Typically, perfumes are complex mixtures of blends of various organic compounds such as alcohols, aldehydes, ethers, aromatic compounds and varying amounts of essential oils (e.g., terpenes) such as from 0% to 80%, usually from 10% to 70% by weight, the essential oils themselves being volatile odoriferous compounds and also serving to dissolve the other components of the perfume.

Brief Summary Text (31):

The water insoluble organic compound, essential oil or perfume is present in the composition in an amount of from 0.1% to 1.0% by weight, preferably from 0.4% to 8% by weight, especially preferably from 0.5% to 6% by weight.

Brief Summary Text (34):

Suitable essential oils are selected from the group consisting of: Anethole 20/21 natural, Aniseed oil china star, Aniseed oil globe brand, Balsam (Peru), Basil oil (India), Black pepper oil, Black pepper oleoresin 40/20, Bois de Rose (Brazil) FOB, Borneol Flakes (China), Camphor oil, White, Camphor powder synthetic technical, Cananga oil (Java), Cardamom oil, Cassia oil (China), Cedarwood oil (China) BP, Cinnamon bark oil, Cinnamon leaf oil, Citronella oil, Clove bud oil, Clove leaf, Coriander (Russia), Coumarin 69.degree. C. (China), Cyclamen Aldehyde, Diphenyl oxide, Ethyl vanilin, Eucalyptol, Eucalyptus oil, Eucalyptus citriodora, Fennel oil, Geranium oil, Ginger oil, Ginger oleoresin (India), White grapefruit oil, Guaiacwood oil, Gurjun balsam, Heliotropin, Isobornyl acetate, Isolongifolene, Juniper berry oil, L-methyl acetate, Lavender oil, Lemon oil, Lemongrass oil, Lime oil distilled,

Litsea Cubeba oil, Longifolene, Menthol crystals, Methyl cedryl ketone, Methyl chavicol, Methyl salicylate, Musk ambrette, Musk ketone, Musk xylol, Nutmeg oil, Orange oil, Patchouli oil, Peppermint oil, Phenyl ethyl alcohol, Pimento berry oil, Pimento leaf oil, Rosalin, Sandalwood oil, Sandenol, Sage oil, Clary sage, Sassafras oil, Spearmint oil, Spike lavender, Tagetes, Tea tree oil, Vanilin, Vetyver oil (Java), Wintergreen, Allocimene, Arbanex.TM., Arbanol.RTM., Bergamot oils, Camphene, Alpha-Campholenic aldehyde, I-Carvone, Cineoles, Citral, Citronellol Terpenes, Alpha-Citronellol, Citronellyl Acetate, Citronellyl Nitrile, Para-Cymene, Dihydroanethole, Dihydrocarveol, d-Dihydrocarvone, Dihydrolinalool, Dihydromyrcene, Dihydromyrcenol, Dihydromyrcenyl Acetate, Dihydroterpineol, Dimethyloctanal, Dimethyloctanol, Dimethyloctanyl Acetate, Estragole, Ethyl-2 Methylbutyrate, Fenchol, Fernol.TM., Florilys.TM., Geraniol, Geranyl Acetate, Geranyl Nitrile, Glidmint.TM. Mint oils, Glidox.TM., Grapefruit oils, trans-2-Hexenal, trans-2-Hexenol, cis-3-Hexenyl Isovalerate, cis-3-Hexenyl-2-methylbutyrate, Hexyl Isovalerate, Hexyl-2-methylbutyrate, Hydroxycitronellal, Ionone, Isobornyl Methylene, Linalool, Linalool Oxide, Linalyl Acetate, Menthane Hydroperoxide, I-Methyl Acetate, Methyl Hexyl Ether, Methyl-2-methylbutyrate, 2-Methylbutyl Isovalerate, Myrcene, Nerol, Neryl Acetate, 3-Octanol, 3-Octyl Acetate, Phenyl Ethyl-2-methylbutyrate, Petitgrain oil, cis-Pinane, Pinane Hydroperoxide, Pinanol, Pine Ester, Pine Needle oils, Pine oil, alpha-Pinene, beta-Pinene, alpha-Pinene Oxide, Plinol, Plinyl Acetate, Pseudo Ionone, Rhodinol, Rhodinyl Acetate, Spice oils, alpha-Terpinene, gamma-Terpinene, Terpinene-4-OL, Terpineol, Terpinolene, Terpinyl Acetate, Tetrahydrolinalool, Tetrahydrolinalyl Acetate, Tetrahydromyrcenol, Tetralol.RTM., Tomato oils, Vitalizair, Zestoral.TM., HINOKITIOL.TM. and THUJOPSIS DOLABRATA.TM..

Brief Summary Text (35):

The water soluble nonionic surfactants utilized in this invention are commercially well known and include the primary aliphatic alcohol ethoxylates, secondary aliphatic alcohol ethoxylates, alkylphenol ethoxylates and ethylene-oxide-propylene oxide condensates on primary alkanols, such as Plurafacs (BASF) and condensates of ethylene oxide with sorbitan fatty acid esters such as the Tweens (ICI). The nonionic synthetic organic detergents generally are the condensation products of an organic aliphatic or alkyl aromatic hydrophobic compound and hydrophilic ethylene oxide groups. Practically any hydrophobic compound having a carboxy, hydroxy, amido, or amino group with a free hydrogen attached to the nitrogen can be condensed with ethylene oxide or with the polyhydration product thereof, polyethylene glycol, to form a water-soluble nonionic detergent. Further, the length of the polyethenoxy chain can be adjusted to achieve the desired balance between the hydrophobic and hydrophilic elements.

Brief Summary Text (41):

Condensates of 2 to 30 moles of ethylene oxide with sorbitan mono- and tri-C.sub.10 -C.sub.20 alkanolic acid esters having a HLB of 8 to 15 also may be employed as the nonionic detergent ingredient in the described composition. These surfactants are well known and are available from Imperial Chemical Industries under the Tween trade name. Suitable surfactants include polyoxyethylene (4) sorbitan monolaurate, polyoxyethylene (4) sorbitan monostearate, polyoxyethylene (20) sorbitan trioleate and polyoxyethylene (20) sorbitan tristearate.

Brief Summary Text (58):

The pH of the composition will be adjusted to pH 7 to 10 with NaOH, KOH, . . . but preferable with an organic alkalinity donor which will not leave streaks such as diethanolamine or triethanolamine.

CLAIMS:

1. A microemulsion composition consisting essentially of approximately by weight:

(a) 0.1% to 20% of at least one disinfecting agent which is selected from the group consisting of a C.sub.8 -C.sub.16 alkyl amine, a C.sub.8 -C.sub.16 dialkyl dimethyl ammonium chloride, C.sub.8 -C.sub.16 alkyl benzyl dimethyl ammonium chlorides, chlorohexidine and mixtures thereof;

(b) 0.1 wt. % to 20 wt. % of at least one surfactant selected from the group

consisting of an ethoxylated nonionic surfactant and a compound which is a mixture of: ##STR7## wherein w equals one to four, B is selected from the group consisting of hydrogen and a group represented by: ##STR8## wherein R is selected from the group consisting of alkyl group having 6 to 22 carbon atoms, and alkenyl groups having 6 to 22 carbon atoms, wherein at least one of the B groups is represented by said ##STR9## R' is selected from the group consisting of hydrogen and methyl groups; X, Y and Z have a value between 0 and 60, provided that (X+Y+Z) equals 2 to 100, wherein in formula (I) the ratio of monoester/diester/triester is 40 to 90/5 to 35/1 to 20, wherein the ratio of formula (I) to formula (II) is a value between 3 to 0.02;

(c) 0.1% to 20% of an amphoteric surfactant selected from the group consisting of having the general formula: ##STR10## wherein X³¹ is selected from the group consisting of CO₂ -- and SO₃ -- and R₁ is an alkyl group having 10 to about 20 carbon atoms, or an amido radical: ##STR11## wherein R is an alkyl group having about 9 to 19 carbon atoms and a is the integer 1 to 4; R₂ and R₃ are each alkyl groups having 1 to 3 carbon atoms; R₄ is an alkylene or hydroxyalkylene group having from 1 to 4 carbon atoms and, alkylamino carboxylates;

(d) 1% to 12% of a water soluble solvent which is selected from the group consisting of mono- and di- C₁-C₆ alkyl ethers and esters of ethylene glycol and propylene glycol;

(e) 0.4% to 10% of a water insoluble organic hydrocarbon, essential oil or a perfume; and

(f) the balance being water.